

CLAIMS

1. Mobile test rig for tyres, characterised in that it is composed of a self-driven platform (10), capable of following rectilinear and circular trajectories, and in that it comprises:

- 5       - a instrument module (11) for testing a wheel-tyre assembly to be tested (12) which permits this assembly to be orientated in all directions, to lean it and to apply a vertical effort to it,
- first swivelling axles, equipped with
- 10   suspensions and driving wheels,
- a processing unit (15) associated to memory means (16),
- means (21) for controlling the test cycle permitting the orientation of the said assembly, and
- 15   the load applied to it to be controlled,

2. Test rig of claim 1, which comprises acquisition and trajectory control means associated to a positioning system (20).

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3. Test rig according to any of claims 1 or 2, which can be piloted remotely.

4. Test rig of claim 3, which comprises radio

25   communication means (17) permitting communication with a control unit (18).

5. Test rig of claim 1, which can be transported.

6. Test rig according to any of the previous claims, which comprises second swivelling axles, equipped with suspensions and non driving wheels.

5        7. Test rig according to any of claims 1 or 6, in which each axle is equipped with four wheels.

8. Test rig of claim 7, which comprises eight axles equipped with driving wheels (E3-E10), and four  
10 axles equipped with non driving wheels (E1, E2, E11, E12).

9. Test rig of claim 1, in which the instrument module (11) comprises one first actuator (26)  
15 permitting the vertical efforts applied to the tyre to be tested to be generated and at least one second actuator (27) permitting it to be leant.

10. Test rig of claim 1, which comprises two  
20 diesel motors (35) driving at least two hydraulic pumps (36), one for the left part of the platform, one for the right part.

11. Test rig according to any of claims 1 or 6, in  
25 which each axle is equipped with an actuator (40) for adjusting the height of the platform.

12. Test rig of claim 1, which comprises at least one camera permitting the trajectory to be monitored,  
30 and at least one camera permitting the deformations of the tyre to be tested to be assessed.

13. Test rig of claim 1, which comprises traction/compression sensors situated at the interface of the spindle of the wheel equipped with the tyre to be tested and the fork holding it.

14. Test rig of claim 8, which comprises:

- two sensors to measure the longitudinal effort and the moment around the vertical axis,
- 10      • two sensors to measure the vertical effort and the moment around the longitudinal axis,
- one sensor to measure the lateral effort,
- one sensor to measure the moment around the lateral axis,
- 15      • one sensor to measure the braking torque.

15. Test rig of claim 1, which comprises a flashing light type signal system, and a siren.

20      16. Test rig of claim 1, in which the instrument module (11) is situated in the centre of the platform.

25      17. Test rig of claim 1, in which the instrument module comprises an actuator (26) assisted by fixed and/or removable ballasts (44, 45) permitting the vertical efforts applied to the tyre to be tested to be generated.

30      18. Test rig according to any of the previous claims, which can be dismantled and that is formed by

three balanced parts: two half platforms (50, 51) and the instrument module (11).

19. Test rig of claim 18, in which the two half  
5 platforms (50, 51) are self-driven.

20. Test rig according to any of the previous claims, in which the wheel-tyre assembly to be tested (12) is an aircraft wheel-tyre assembly.

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21. Implementation process of the test rig according to any of the previous claims comprising the following steps:

15 - a step for positioning the test rig in one position of a test track,

- a step for learning an ideal trajectory, by moving the test rig at low speed along the longitudinal axis of the track, with acquisition of the points of this trajectory using the positioning system,

20 - one or more test steps.

22. Process of claim 21, in which each step of the test comprises:

- a phase of speeding up the test rig,
- 25 • a test phase during which a series of skid angles of the tyre to be tested, pre-programmed and uploaded onto the test rig, is launched,
- a stop phase.